

Clivias Are Excellent Pot Plants for Windows or Conservatories---Primula Malacoides Another Charming Pot Plant for Window Gardens

Clivias are useful plants either for be obtained from Henry A. Dreer, ing is governed to a certain extens the window garden or conservatory. Philadelphia. the window garden or conservatory. They are beautiful in bloom and their bold foliage makes them useful for filling in when out of flower.

The culture of clivias is of the very easiest. The flowering period is during the spring and summer months, the plants remaining in flower a long time. The flowers are borne in large clusters of from ten to twenty flowers each and the individual blossoms are about two inches long. The color is orange red, shading to buff.

The clivia does not like to be dissame pot for several years and given an abundance of liquid manure just previous to and during the flowering

When potting use good potting soil. adding sufficient sand to make it porous, and add a fair quantity of ground Take care not to break the thick, fleshy roots, Clivias do not object to shade, with

winter temperature of not less than fifty degrees at night, with moderate watering until the plants are in active growth, when they require an

About three years are required to grow from seed, single crowned plants in six inch pots. A hothouse is needed to germinate the seeds. Plants may



PRIMULA MALACOIDES.

This plant was discovered by George Forrest of Bees, Limited, Liverpool, in the Yunnan Alps and was introduced a few years ago by that seed house.

Delivord Malacoides is certainly a cover that portion of the ground to

charming pot plant for window gar-dens. The plants literally spend gathered in the fail. These lay on themselves in bloom and at the same time provide seed for the next genera-

Whether in large or small pots, the the rest are ploughed under. plants throw up a cloud of fairylike bloom on stalks six to ten inches long. beginning to flower as soon as the crown of leaves has developed. The larger and stronger the plants the greater the production of blooms.

There are two varieties, the original, a delicate shade of lavender, and a bene, as the plants are excessive feed-doubt be produced later. The flowers measure from one-half to three-quarters of an inch in diameter and are borne in whorls on tall, graceful spikes at its base so that the peas can be in great profusion. The plants bloom in four or five months from sowing. Primula malacoides thrives best in a

if planted in a more direct line. moderately heated greenhouse, as it loves moisture. If allowed to dry out it dies quickly. Seeds may be obtained of Peter Henderson & Co., 35 Cortlandt street, or Vaughan's seed store, Barclay, corner Church street.

DWARF PEAS.

By H. E. HAYDOCK.

Dwarf peas have many points to recommend them. In the first place no brush is required for their support. This saves the trouble of gathering the brush and properly setting it so that it will not be blown over by beavy winds.

While the tall growing varieties of neas will perhaps bear a little better they also require more room, as owing to their height they cast more shade Therefore the dwarf varieties may be planted closer together, and so, taking

The Gladiolus is one of the most satisfactory flowers grown and there

not enjoy this grand flower-it is as

Blooms from July to frost if you plant a few bulbs each month from

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easy to grow as the potato.

April to July.

Our 1919 Spring Catalogue sent on request.

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JUST \$5

peated sowings in this manner. FERTILIZING THE GARDEN. shutters.

Small size, taking less space, allow more to be planted, size space, allow more to be planted, thus offsetting the heavier bearing of the taller varieties.

Dwarf peas being only from twelve space, allow more to be planted, thus offsetting the heavier bearing of the taller varieties.

Dwarf peas being only from twelve grown as close as six inches apart when they are planted in double rows, and these double rows as close as two Stable manure is the best fertilizer plying the necessary plant food.

inches.

most satisfactory.

Planted at the same time it will be

found that Nott's Excelsior will ripen

first, followed closely by American Wonder, thus one will supplement the

other. They then can be planted every

two weeks until the first of June

Some may prefer, however, to plan with early peas those that mature

much later, rather than make re-

half feet apart.

weeks up to the first of June.

Sunlight Double Glass Sash Co., feet apart. Still this way of plant- as the plant foods are immediately

soil, otherwise it will injure the plants.

THE COMING UP OF SEEDS.

BY MARTHA MCCULLOCH WILL-IAMS.

This bit of experience is set forth way: Through an article contributed 4:15 o'clock. to an outdoor publication I came in touch with an English exile in Yokohama, and after some correspondence, received from him seed of some very rare and wonderful Japanese morning names in translation were poetic inkept in a steam heated apartment until planting time—that is to say, the

middle of February, 1910. They were well planted-in fine loos earth, only twice their own depth. Further the earth was kept moist, but not wet, and the pots containing it set, after the first two days, in full sunshine, but, of course, inside the ald Gem. It is excellent for home use house. In eight days a seed popped and near by markets but does not up. The new plant was particularly lusty. Next day there was another, after two more days a third. All the young plants throve, but for a full month they had the pots to themselves. Then three more seed did their duty. After that hope of further germina-tion was abandoned. The pots had young plants grew very slowly, but ed flower buds. These, albeit ustodian of them more than ever they were again taken inside, fertilized weekly, with liquid manure, and kept well watered and free of dust. Thus there came to blow a frilly white glory, as frilly almost as a double etunia, but translucent as to texture, a white margined pure scarlet flower. bigger than the common, and a very long throated blue and white blossom was almost pure white at first un-folding, but by 8 o'clock showed all "a kinde of a pestilent fever" that had cloudings of blue. The vine is a most of the whites and Indians in and near vigorous grower, and the fine semipalmate leaves veined and streaked

in latest of them appeared upon the 19th Bees. They came out of little holes in owner from her own land and into a law suit!

planting. Yet the newer seedlings things, and made such a constant yell-show no lack of health or vigor—ing noise as made all the woods ring they are growing indeed more rapidly of them and ready to deaf the stroyed by a neighbor's flock of hens; also the grains that the rye was protection. For small patches 1½ teaspoonfuls than their rathe kinfolk. The puzzle hearers." is: Why under exactly the same con-ditions seed of the same sort should for believing that the cicadas "did eat route, via the public road and the soap to each gallon of water will prove

with greeny white.



Clivia.

and turned upside down in the transwary of disturbing allen sowings until the same error.

long after even an unreasonable time. Why all the seed did not come up. morning glories being especially hardy. or the family garden, also for the is a matter of speculation. Opinion from across the sea.

Garden Full

as the plant foods are immediately available and give the plants a quick start. A good fertilizer to use is one containing 3 to 4 per cent. nitrogen, 7 to 8 per cent. potash. Broadcast this over the garden in the spring at the rate of 3 to 4 pounds to the square rod. If no manure has been used the quantity of fertilizer should be doubled. Rake the fertilizer lightly into the surface of the soil.

Hardwood ashes are also beneficial, spread at the rate of 10 to 20 pounds to the square rod, raked in lightly.

Hardwood ashes are also beneficial, spread at the rate of 10 to 20 pounds to the square rod, raked in lightly.

Swedish Government, in which he said:

"There are a kind of locusts which and the lecture hall of the museum for the lecture hall of the museum said:

"There are a kind of locusts which and the lecture hall of the museum follows: April 12, "Scenie Features of North American Mountains," by LeRoy Jeffers; April 19, "The Place of Trees in Men's Affairs," by Carl Bannwart; April 26, "Some Interesting Tropical Trees," by Dr. W. A. Murrill; May 3, "Evergreens," by G. V. Nash; May 10, "Plant Hybrids: How the locusts can chirp. During that to the square rod, raked in lightly.

Hardwood ashes are also beneficial, spread at the rate of 10 to 20 pounds to the square rod, raked in lightly. spread at the rate of 10 to 20 pounds to the square rod, raked in lightly.

Poultry manure is particularly valuable for leafy vegetables. Spread thinly able for leafy vegetables. Spread thinly over the ground and mix with the surface soil by raking. If it is used after the plants are set out or are up from with three or four times its bulk of soil, otherwise it will injure the plants.

Produced: Their Uses," by Dr. A. H. Stime they make, with the sting in their stout. (Exhibition of flowers May 10 tail, holes in the soft bark of the little and 11.) May 17, "The Future of branches on trees, by which means a Mareican Forestry," by Prof. J. W. these branches are ruined. They do no other harm to the trees or other blants."

Toumey: May 24, "The Recognition of the Olisonous Properties in Unknown Plants," by Dr. H. H. Rusby: For nearly 300 years, then, the written record of the cleada has been of the Panama Canal Zone," by Dr.

Botanical Garden station, by trolley labelled with its native name. The Garden, Bronx Park. Visitors coming by the subway change to the elevated deed, the descriptions accompanying rallway at 149th street and Third ave them presaged marvellous flowers nue. Those coming by the New York, Naturally the seed commanded special Westchester and Boston Railway care. They came in late fall and were change at 180th street for crosstown trolley, transferring north at Third

> The Rocky Ford muskmelon is in reality Nettod Gem, introduced thirty-eight years ago, 1881, by W. Atlee Burpee & Co. The earliest muskmelon tested in our trial gardens is Emership well.

INCENSE PLANT.

The incense plant, humea elegans, should be started this spring from seed, and the plants kept in pots the first season, as being blennial they do the coolth of May and early June, the not being hardy they will not winter clusively that we have. New Engover outdoors.

are excellent for cutting.

found.

SEVENTEEN YEAR LOCUSTS.

England's Memorial." In it he told of over the outer rim the most delicate prevailed in 1633 and "carried off many

vary so much in germination. Had all up the green things." The appearance gates. We abandoned grain culture effective against all garden aphids. the pot surfaces been left undisturbed of the dead and withered branches and planted the field to fruit. To there might be yet other later sproutdoubtless was such as to justify such ings. But two pots were dug all over a conclusion. One "T, M." supposed staked and surrounded with stones amount of nicotine sulphate needed,

to be Thomas Matthews, son of Gov. planting of the first fruits. Samuel Matthews of Virghéa, who
Hereafter the planter will be very observed the cicadas in 1675, fell into

"The third strange appearance," he writes of the disasters of that year "was swarms of files about an inch long and big as the tip of a man's flower garden, and where it can be ob-is divided as to sweating in the little finger, rising out of spigot holes tained its liberal use will be found steamer hold or drying out after ar-in the earth, which eat the newprofitable. It keeps the soil in good rival. The moral is—wait and watch, sprouted leaves from the tops of the mechanical condition, as well as sup- all ye who put your hopes into seeds trees without other harm, and in a month left us."

It is well to use a commercial fer-tilizer in addition to the stable manure. NEW YORK BOTANICAL GARDEN was a more accurate observer. He

of the Panama Canal Zone," by Dr. piling up, undergoing corrections now M. A. Howe; June 7, "The Botanical and then, receiving new discoveries Garden at Buitenzorg, Java," by Dr. from time to time. As nearly as can H. A. Gleason. (Exhibition of roses be judged, it is complete now. The and peonles June 7 and 8.) June 14, latest addition is a circular, "The 17-"Destructive Insects," by Dr. F. J. Year Locust in 1919," written by Dixon Seaver. The lectures, which occupy Merritt of the Office of Information. will feed upon plants distantly related, an hour, will be illustrated by lantern United States Department of Agri- Whis is an important fact which should for the benefit of those who plant im- slides and otherwise. Doors closed at culture. It gives a succinct history of the considered in the control measures. ported seed. It came about in this 4 o'clock: late comers admitted at the cicada and the protective means. For instance, the potato louse (Macrosithat can be taken against it. The museum building is reached by circular is available to interested perthe Harlem division of the New York sons in the twenty-one States where Central and Hudson River Railroad to the periodical cicada will appear this year, which includes New York, New cars to Bedford Park or by the Third Jersey, Massachusetts, Vermont, Maryglories. Eleven varieties in all, each avenue elevated railway to Botanical land, Delaware, Pennsylvania and other Southern and Western States.

FLOWERS FOR BEES.

To furnish flowers that supply the most honey, if the plants are to be raised from seed, sow sweet alyssum, aquilegia, aubretia, balsam, candytuft, clarkia, myosotis, mignonette, nasturtium, nemophila, nigella, silene and stocks.

will have ample room for development. in the fall should be disked and Because the plants are grown in a ploughed under or burned. Weeds, crowded condition is the cause of many failures. Better a few good than a lot families as the cultivated crops, should of poor plants.

REAPING WITHOUT SOWING.

have not sown? The annals of agribeen set upon the outer sill-through not flower until the second season and culture in this country show conland is not alone in the indictment. Give them a light open compost and It has been the fate of agriculture in imperfect, upon opening gave such if frost is excluded no artificial heat america to leave in its wake exhausted promise of beauty as to make the will be required.

America to leave in its wake exhausted most effective spray that can be used promise of beauty as to make the will be required. The plants can be set out next sea- taining profitable crop production. The rate of one part nicotine sulphate to anxious to pamper and cocker the son. They are from four to six feet history of the Western movement may one thousand parts of water the spray plants into full strength. Therefore high, of fragrant redish brown and be condensed into this single phrase, is effective against most aphids. The the impulse of farmers to build treas. following formula supplies the in-Formerly the seeds were offered by ure cities out of soil fertility. Our gredients in the right proportions various seedsmen, but now Thorburn's agricultural development has been is the only catalogue where they are made at the expense of America's greatest natural resource. We have developed our agriculture in the same long, manner as oil operators have developed their industry. When an oil well goes In 1669 Nathaniel Moreton, who dry the drill is sent down in a new "gusher" is the reward.

HENS AS TROUBLE MAKERS.

She is ubiquitous in the country "It is to be observed," he says, "that and she is responsible for more il. the spring before there was a numer- temper and swear words than any After these early plants were thus ous company of Flies, which were like other biped. Cooperating with her ir- two or three purposes. in flower five more seed came up. The for bigness unto Wasps or Bumble- responsible owner, she can drive an

tecting. I placed a wire netting along

The Best Varieties of Dwarf Peas for the Home Garden---Best Fertilizers---Control of Plant Lice---Flowers for Bees

removing the stones and replacing solve it in hot water.

Spray used for aphids must come them was a continual source of irri-

Occasionally the hens came up to the lawn and the flower garden, and to protect the plants we set around them old horseshoes obtained from the blacksmith. This served for a time. but upon one occasion the old gardener became so excited that with the aid of the dogs he drove the hens into the barn and cut the nails from the claws of every one. The gardener's boy thought it such a fine joke that he narrated the circumstances to the neighboring boys. Then the owner of the hens lay in wait for the gardener and gave him a beating, saying that his hens had ceased to lay since their scratching for a living had been made mpossible. He was obliged to sell

The gardener obtained a warran for assault and the hen man was fined. In revenge he sued me for the act of my servant. Although I had beer away at the time, my attorney argued the case on the facts; the country justice gave a heavy money judgment against me, saying I had been guilty of cruelty toward a poor man and had violated the laws of the S. P. C. A. of which I was a member! The famous trial of Bardell against Pickwick into rows makes the application of could not have been more diverting. the spray much easier. The decision was reversed upon appeal to a higher court. A few days later my barn was set afire and that building destroyed with great damage to my stock. I am now seeking a home in some "howling wilderness" where no hen can break in and steal.

CONTROL OF PLANT LICE IN THE VEGETABLE GARDEN.

Aphids, or plant lice, are small, softpodied insects that obtain their food by sucking the juices from plants by means of a beak which they insert most often in the under side of a leaf. They often cause the leaf to curl, and in the case of severe attacks ruin the crop by killing many of the plants.

Although there are many species of aphids which attack vegetable crops, fortunately they can all be controlled by the same materials and the same aphids have certain peculiar habits a knowledge of which enables one to ical with them effectively.

The life history of all the garden plant lice is much the same. All pass the winter in the egg stage in north-ern localities. Most of the females produce living young without the in-tervention of the male. Both sexes appear in the fall, however, and fertilization occurs previous to the laying of the eggs, which survive the winter. All species produce both winged and wingless forms. Each female probably produces on the average more than forty young, and as many as fifteen to twenty-five generations a year.

Most of the different species have characteristically colored bodies, but the color of the aphids of some species may vary from a pale green to nearly black. Most aphids are some shade of green, but they may be black, pink yellow or almost white.

While most aphids of the same species feed upon only closely related plants, it sometimes happens that they The phum solanifold) spends the winter, early spring and late fall on the rose in preference to other plants. It migrates to potatoes, tomatoes, peppers egeplants and many other plants during the latter part of spring. The pea aphid Macrosiphum pisi) migrates back and forth between peas and clover. The spinach aphid (Myrus persicue) feeds upon a wide range of vegetables and trees, including peach, cherry, spinach, cabbage, celery, &c. The cabbage louse (Aphis brassicae) is mostly confined to plants of the family crucifers, and the melon louse (Aphis gossypii) is usually confined to

The first step in the control of plant lice is to destroy everything upon Thin seedling annuals so each plant laid. Crops badly infested with aphids especially those belonging to the same not be allowed to grow, as they afford an excellent breeding place.

Aphids insert their beaks into the plant tissues for their food and are not injured by arsenical sprays. Some spray must be used which will kill the insect by contact and yet be so weak that it will not injure the plant. Nicotine sulphate (46 per cent. nico-

tine) is the most easily prepared and

Nicotine suiphate (40 per cent. nicotine), 2-5 pint, or 6.1 fluid ounces; any laundry soap, 2 pounds; water, 50 gal-

The soap is added as a spreader and to make the solution slightly more volatile. When the nicotine sulphate is three and a half inches across. It lived at Cambridge, Mass., wrote "New section of the field, and a short lived used with water alone the addition of soap alds materially, but when used in combination with other sprays the soap is omitted. The nicotine sulphate may be added to Bordeaux mixture, lime sulphur or arsenate of lead in the same proportions as with water. The one application may thus serve

When used against the potato aphid For small patches 11/2 teaspoonfuls

and the trees thrived, but the land | put it in the spray outfit and dilute | on steam pipes or over oil lamps, and between the trees could not be given to heed crops, so bramble fruits were sulphur to the proper proportion.

Set in the same way, but the labor of When soap is added it is best to distinct the fundating should be done on a

> into direct contact with the lice to be effective. As the aphids are found on plying the "Nico-Fume" to the steam the lower sides of the leaves, it is necessary to have a spray apparatus which will underspray the leaves. A nozzle attached to the pole at an angle of 45 degrees serves this purpose very

It is highly desirable that high pressure (126 to 175 pounds) be used, as this creates a mist which is blown about and reaches many more lice than would otherwise be possible. For a few plants an atomizer or

whisk broom may be used for applying the spray. For city gardeners a knapsack spray is usually sufficient However, for really effective work a barrel pump or power outfit is best, because it furnishes more pressure. The barrel pump is large enough for the average commercial garden, while the power outfit may be used on large commercial gardens. One to four leads of hose may be used on a power outfit.

The spraying should be done while the foliage is dry, as moisture on the plants tends to weaken the spray material and make the results unsatisfactory. The training of the vine crops For the control of aphids in green-

houses the evaporation of a quickly volatile alkaline preparation known as "Nico-Fume" is recommended. It may be evaporated most conveniently

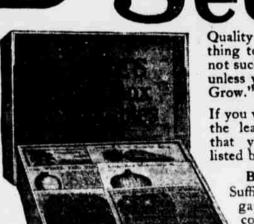
still night, with all the ventilators tightly closed. An oil can with the opening enlarged is excellent for ap-

The control of plant lice is really very easy even though the lice may attack every vegetable in the garden, The most important points to be remembered in controlling lice are: First, to watch constantly and apply the remedy as soon as the pest ap-pears and before it has curled the leaves; second, to make a application of the spray; and third, to use high pressure in making the ap-H. D. BROWN, Illinois.

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